

FORT BAKER

Proposed Plan EIS

APPENDIX A

PROPOSED TREATMENT OF NATIONAL HISTORIC LANDMARK STRUCTURES AT FORT BAKER



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APPENDIX A PROPOSED TREATMENT OF NATIONAL HISTORIC LANDMARK STRUCTURES AT FORT BAKER

This appendix contains a list of historic structures that contribute to the significance of Fort Baker as a national historic landmark, along with the proposed treatments for future management of each building under the Proposed Action. A map showing Fort Baker building numbers is also provided (Figure A-1).

HISTORIC BUILDING TREATMENTS FORT BAKER PLANNING AREA

No.	Building Name	Treatment
FB-0404	Utility Structure	ST
FB-0405	NCO Mess	RH
FB-0407	Mine Storehouse	RH
FB-0408	Ammunition Bunker	ST
FB-0409	Mines Depot Powerhouse	ST
FB-0410	Mines Detonator Magazine	ST
FB-0411	Mine Depot TNT Storage Magazine	ST
FB-0412	Mine Loading Rooms	ST
FB-0414	Heating Fuel Storage Tank	RM
FB-0415	Mine Wharf	RM
FB-0421	Water Tank	ST
FB-0422	Water Tank	ST
FB-0423	Water Tank	ST
FB-0502	Transformer Sub-station	RH
FB-0511	Branch Library	RM
FB-0513	Maintenance Shop	RM
FB-0515	Gas Station Disposal Facility	RM
FB-0519	Post Chapel	RH
FB-0522	NCO Quarters (Single)	RH
FB-0523	NCO Quarters (Duplex)	RH
FB-0526	Electrical Transformer Building	ST
FB-0527	NCO Quarters (Duplex)	RH
FB-0529	NCO Quarters (Duplex)	RH
FB-0530	NCO Quarters (Duplex)	RH
FB-0531	NCO Quarters (Duplex)	RH
FB-0533	Post Hospital	RH
FB-0537	Tennis Court	ST
FB-0538	Garage	RM

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HISTORIC BUILDING TREATMENTS FORT BAKER PLANNING AREA

No.	Building Name	Treatment
FB-0541	Garage	RM
FB-0543	Garage	RH
FB-0545	Garage	RH
FB-0546	Duplex Housing	RH
FB-0547	Duplex Housing	RH
FB-0549	Duplex Housing	RH
FB-0556	Post Hospital Garage	RM
FB-0557	Bakery	RH
FB-0559	Quartermaster and Subsistence Storehouse	RH
FB-0561	Wagon Shed	RH
FB-0564	Garage	RH
FB-0566	Exchange Gas Station	RH
FB-0571	Battery George Yates	ST
FB-0572	Water Reservoir	RH
FB-0573	Battery Duncan	ST
FB-0573A	Battery Duncan Latrine	ST
FB-0575	Cavallo Battery	ST
FB-0575A	Cavallo Battery Entrance Gate	ST
FB-0575B	Rangefinder Station and Cavallo Battery	ST
FB-0577	Water Pump Station	ST
FB-0578	Water Pump Station	ST
FB-0601	Artillery Barracks	RH
FB-0602	Artillery Barrack	RH
FB-0603	Administration Building	RH
FB-0604	Commanding Officer's Quarters	RH
FB-0605	Officers Quarters Duplex	RH
FB-0607	Officers Quarters Duplex	RH
FB-0607	Officers Quarters Duplex	RH
FB-0615	Guard House	RH
FB-0623	Post Exchange and Gymnasium	RH
FB-0627	Communications Cable Hut	ST
FB-0629	Officers Quarters Duplex	RH
FB-0630	Saterlee Breakwater	ST
FB-0631	Officers Quarters Duplex	RH
FB-0632	Moore Breakwater	ST
FB-0633	Marine Maintenance Shop	RH
FB-0634	Boat Ramp	ST
FB-0636	Artillery Barracks	RH
FB-0637	Commissary Storehouse	RH
FB-0644	Blacksmith Shop	RH
FB-0645	Carpenter/Paint Shop	RH
FB-0648	Flagstaff	ST

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HISTORIC BUILDING TREATMENTS FORT BAKER PLANNING AREA

No.	Building Name	Treatment
FB-0659	Storage Shed	RM
FB-0662	Seawall	ST
FB-0664	Flammable Storage Building	ST
FB-0665	Maintenance Shop	RM
FB-0666	Ordinance Storehouse	RH
FB-0668	Fueling Dock and Marine Railway	RH*
FB-0670	Mine Cable Tank Building	RH
FB-0671	Pump House	RH
FB-0679	Boat Repair Shop	RH
FB-0689	Motor Repair Shop	RM
FB-0691	Mobile Searchlight Storage	RM
FB-0699	Ship Repair Shop	RH
FB-0708	East Road	RH
FB-0709	Murray Circle	RH
FB-0711	Moore Road	ST
FB-None	Sausalito Lateral Overpass	ST
FB-None	Bunker Road Retaining Wall	ST
FB-None	Tennis Court Retaining Wall	ST
FB-None	Kober Street Retaining Wall	ST
FB-None	McReynolds Road Retaining Wall	ST
FB-None	Mine Cable Casemate	ST
FB-None	Cable Casemate Seawall	ST
FB-None	McReynolds Road	RH
FB-None	Bunker Road	RH
FB-None	McCullough Road	RH
FB-None	Parade Ground	RE

* Although this structure will be rehabilitated, the amount of replacement required for continued use of this structure will constitute an adverse effect to the historic resource.

LEGEND

ST = Stabilize and Preserve in Existing Form

RH = Rehabilitate and Reuse

RE = Restore to Historic Time Period

RM = Remove

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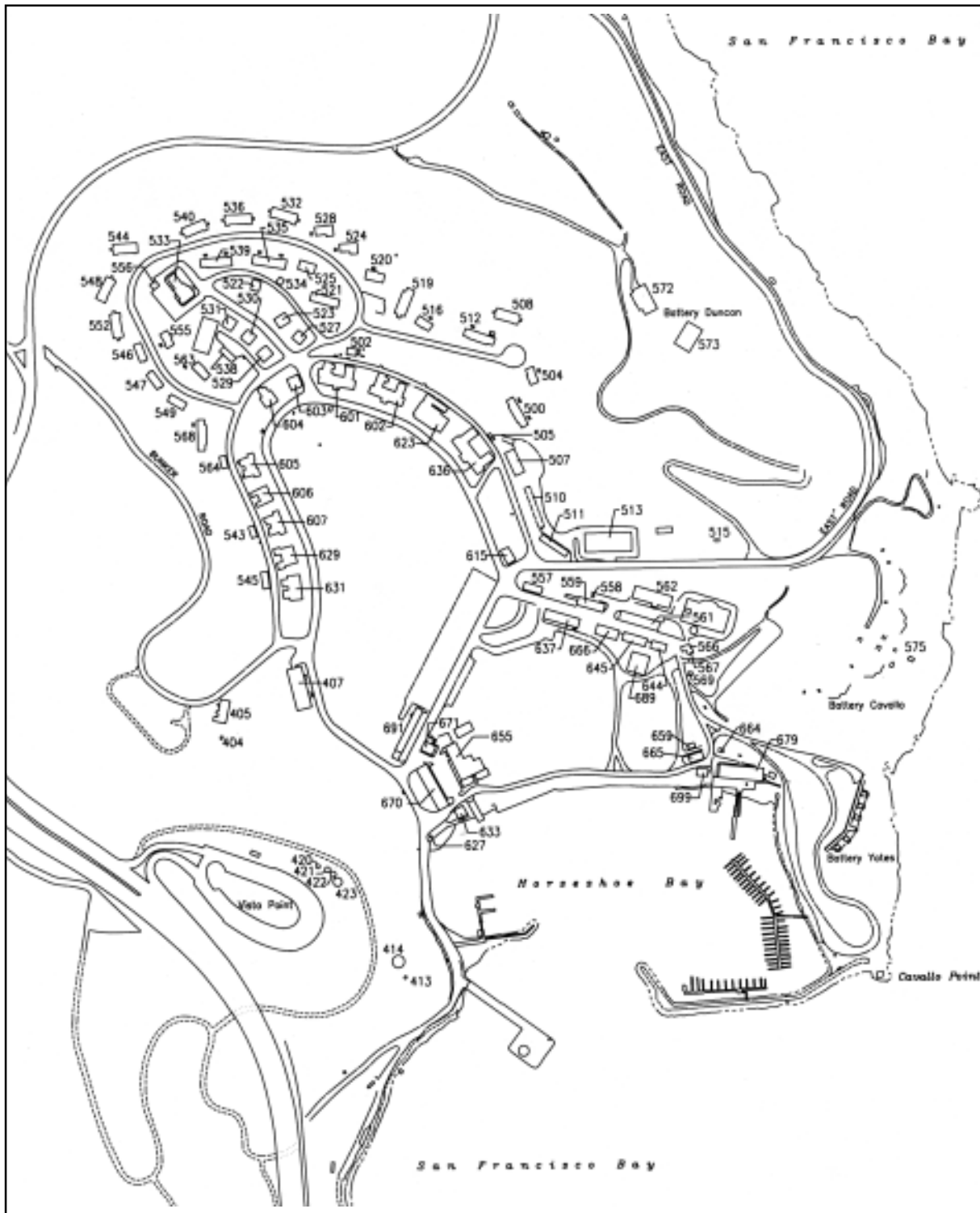


Figure A-1 Fort Baker Building Numbers



Approx. Scale in Feet
0 500

DATE: October 1998



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APPENDIX B

SPECIES FOR HABITAT RESTORATION AT FORT BAKER



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APPENDIX B SPECIES FOR HABITAT RESTORATION AT FORT BAKER

BEACH AND COASTAL STRAND SPECIES

<i>Ambonia latifolia</i>	Yellow sand verbena
<i>Achillea millefolium</i>	Yarrow
<i>Ambrosia chamissonis</i>	Silver beach bur
<i>Artemisia pycnocephala</i>	Beach sagewort
<i>Baccharis pilulais</i> (prostrate variety)	Coyote bush
<i>Camissonia cheiranthifolia</i>	Beach primrose
<i>Castilleja latifolia</i>	Dune Indian paintbrush
<i>Eriogonum latifolium</i>	Coastal buckwheat
<i>Eriophyllum staechadifolium</i>	Lizard tail
<i>Festuca rubra</i>	Red fescue
<i>Fragaria chiloensis</i>	Dune strawberry
<i>Leymus triticoides</i>	Creeping wild rye
<i>Lotus scoparius</i>	Deerweed
<i>Mimulus aurantiacus</i>	Sticky monkey flower
<i>Poa douglasii</i>	Bluegrass

Note: Several other non-native species can complement this planting palette if determined to be successful at Crissy Field

COASTAL SCRUB AND GRASSLAND SPECIES, INCLUDING MISSION BLUE BUTTERFLY TARGET HOST AND NECTAR PLANTS

<i>Artemisia californica</i>	California sagebrush
<i>Aster chilensis</i>	California aster
<i>Baccharis pilularis</i>	Coyote brush
<i>Brodiaea laxa</i>	
<i>B. pulchella</i>	
<i>Chrysolepsis villosa</i>	
<i>Eriogonum latifolium</i>	Coast buckwheat
<i>Gnaphalium pallustre</i>	Pearly everlasting
<i>Lupinus albifrons</i>	Silverleaf lupine
<i>L. variicolor</i>	
<i>L. formosus</i>	

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APPENDIX C

LIST OF SPECIAL STATUS SPECIES



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APPENDIX C LIST OF SPECIAL STATUS SPECIES

Species	Status	Habitat	Known Distribution	Occurrence at Fort Baker
Mammals				
Yuma myotis bat <i>Myotis yumanensis</i>	FSC	Roosts in caves, mines, and buildings.	Found within the SF Bay Area and Marin Headlands.	May occur in buildings at Fort Baker.
Long-eared myotis bat <i>Myotis evotis</i>	FSC	Roosts in trees, caves, mines, and buildings.	Found within the SF Bay Area.	May occur in buildings at Fort Baker.
Fringed myotis bat <i>Myotis thysanodes</i>	FSC	Roosts in caves, mines, and buildings.	Found within the SF Bay Area.	May occur in buildings at Fort Baker.
Long-legged myotis bat <i>Myotis volans</i>	FSC	Roosts in trees, caves, mines, and buildings.	Found within the SF Bay Area.	May occur in buildings at Fort Baker.
Townsend's western big-eared bat <i>Plecotus townsendii townsendii</i>	FSC	Roosts in caves, mines, and buildings.	Found within the SF Bay Area and Marin Headlands.	Likely to occur in low numbers in buildings at Fort Baker.
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC	Roosts in trees, caves, mines, and buildings.	Found within the SF Bay Area.	May occur in buildings at Fort Baker.
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/SE	Salt marshes with dense pickleweed.	Isolated populations in salt marshes around SF Bay.	Salt marsh habitat not present; species not likely to occur.
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC	Found in grasslands, scrub, and wooded areas.	Found throughout the SF Bay Area.	Most likely occurs at Fort Baker.
Point Reyes jumping mouse <i>Zapus trinotatus orarius</i>	FSC	Coastal forests	Found only along the coast north of Marin County.	May occur at Fort Baker.

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American badger <i>Taxidea taxus</i>	CSC	Grasslands	Found throughout California.	Observed on Wolfback Ridge.
California sea lion <i>Zalophus californianus</i>	MMPA	Coastal waters and haul-out areas along the coast and islands.	Found within SF Bay, with a number of haul-out locations.	Sea lions have been observed using Horseshoe Bay.
Harbor seal <i>Phoca vitulina</i>	MMPA	Coastal waters and haul-out areas along the coast and islands.	Found within SF Bay, with a number of haul-out locations.	Harbor seals have been observed using Horseshoe Bay.
Birds				
American peregrine falcon <i>Falco peregrinus anatum</i>	FE/SE	Breeds on cliffs and ledges adjacent to open water. Will nest on tall city buildings.	Coast range and Sierra Nevada range.	Nests have been observed on the Golden Gate Bridge, and probably forages over Fort Baker.
California brown pelican <i>Pelecanus occidentalis californicus</i>	FE/SE	Fishes in coastal waters and the SF Bay. Nest on channel islands and Mexico.	Coastal California.	Observed foraging and resting within Horseshoe Bay.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/SE	Salt marshes.	California coastal wetlands, known in SF Bay salt marshes.	The appropriate habitat does not exist at Fort Baker. It is unlikely that this species occurs at Fort Baker.
Least tern <i>Sterna antillarum</i>	FE/SE	Forages in shallow and open water and nests in colonies in salt ponds.	Known to nest and forage in the SF Bay.	Least terns have been observed feeding in Horseshoe Bay and next to the jetties.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT/CSC	Forages on dry upper beaches. Nests on sandy beaches or salt pond levees.	Spring and summer migratory visitor to coasts. Known to nest at Pt. Reyes.	Small beach with frequent human disturbance unlikely used for foraging. Fort Baker beach not suitable for nesting.

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Species	Status	Habitat	Known Distribution	Occurrence at Fort Baker
Bald eagle <i>Haliaeetus leucocephalus</i>	FE/SE	Forages on fish in large rivers and water bodies.	Remote locations in Northern California; does not nest in Bay Area.	Rare migrant in the GGNRA, but highly unlikely to use Fort Baker due to human disturbance.
Common loon <i>Gavia immer</i>	CSC	Breeds in large fresh water lakes, forages along Pacific coast.	Common migrant along coastal California.	Has been observed in Horseshoe Bay.
Double-crested cormorant <i>Phalacrocorax auritus</i>	CSC	Yearlong resident of large salt and fresh water bodies.	Known to occur within SF Bay, and nest on Bay Area bridges.	Has been observed in Horseshoe Bay.
Tricolored blackbird <i>Agelaius tricolor</i>	FSC	Breeds near fresh water wetlands.	Found in limited locations within the SF Bay and Central Valley.	Unlikely to be found at Fort Baker, as breeding habitat is not present.
Bell's sage sparrow <i>Amphispiza belli belli</i>	FSC	Dense stands of scrubs.	Range includes SF Bay Area.	Could possibly use Fort Baker.
Salt-marsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC	Dense thickets of willows near fresh water.	Found throughout SF Bay Area.	Could possibly use Fort Baker.
Ashy storm-petrel <i>Oceanodroma homochroa</i>	FSC	Marine Habitats.	Coastal California.	No reports of occurrence at Fort Baker.
Ferruginous hawk <i>Buteo regalis</i>	FSC	Hunts in grasslands and scrub habitats.	Only winters in California, found within SF Bay Area.	May visit Fort Baker during winter.
California gull <i>Larus californicus</i>	CSC	Frequents many types of habitats, yet breeds east of the Sierra Nevada range. Two nesting colonies found in salt ponds in SF Bay.	April through August at breeding grounds east of Sierra Nevada range, otherwise found throughout coastal California.	Has been observed in Horseshoe Bay.

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Species	Status	Habitat	Known Distribution	Occurrence at Fort Baker
Amphibians and Reptiles				
California red-legged frog <i>Rana aurora draytoni</i>	FT/CSC	Pools of streams, marshes, and pond edges with willows and emergent vegetation.	Occurs in the coast range east to the Sierra Nevada range.	Occurs within the Marin Headlands, but unlikely to occur at Fort Baker as suitable wetland habitat does not exist.
Foothill yellow-legged frog <i>Rana boylei</i>	SC	Wooded streams with rocky bottoms.	Found in coastal California streams.	Unlikely to occur as habitat is not present.
California Tiger Salamander <i>Ambystoma californiense</i>	Federal Candidate	Adults wait for prey in subterranean burrows. Pre-metamorphic juveniles require permeate or temporary ponds.	Annual grassland and Valley-foothill hardwood forests along the coast from Marin to Santa Barbara, and from Yolo to Tulare counties in the Central Valley.	Required wetland breeding habitat does not occur at Fort Baker. It is unlikely that this species occurs.
Fish				
Winter-run chinook salmon <i>Oncorhynchus tshawytscha</i>	FE/SE	Adults feed in open ocean and migrate to inland streams. Eggs and young require cold rivers with pools and clean gravel.	Pacific coast rivers from central California to central Washington.	Breeding habitat does not occur at Fort Baker. Salmon may enter Horseshoe Bay as they enter or leave SF Bay.
Winter-run chinook salmon critical habitat <i>Oncorhynchus tshawytscha</i>		Adults feed in open ocean and migrate to inland streams. Eggs and young require cold rivers with pools and clean gravel.	The Sacramento River and related riparian zones from Keswick Dam downstream to and including SF Bay.	Horseshoe Bay is considered critical habitat for the winter run chinook salmon.

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Species	Status	Habitat	Known Distribution	Occurrence at Fort Baker
Spring-run chinook salmon	ESU	same as above	same as above	Adults migrating to the Sacramento-San Joaquin River system may be present in the S.F. Bay from March through July. Outmigrating smolts may be present from November through March.
Fall and late-fall run chinook salmon	ESU	same as above	same as above	Adults migrating to the Sacramento-San Joaquin River system may be present in the S.F. Bay from July through February. Outmigrating smolts may be present throughout the year.
Coho salmon - central California ESU <i>Oncorhynchus kisutch</i>	FT	Adults feed in open ocean and migrate to inland streams. Eggs and young require cold rivers with pools and clean gravel.	Pacific coast rivers from Monterey Bay to northern boarder.	Breeding habitat does not occur at Fort Baker. Salmon may enter Horseshoe Bay as they enter SF Bay.
Steelhead - central valley and central California coast ESUs <i>Oncorhynchus mykiss</i>	FT	Adults feed in open ocean and migrate to inland streams. Eggs and young require cold rivers with pools and clean gravel.	Pacific coast rivers.	Breeding habitat does not occur at Fort Baker. Salmon may enter Horseshoe Bay as they enter SF Bay.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FPT	Sloughs and backwaters for the SF Bay Delta and adjacent Sacramento River.	The SF Bay Delta and adjacent Sacramento River.	Horseshoe Bay is outside the range of this species. Required habitat does not exist at Fort Baker.

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Invertebrates				
Mission blue butterfly <i>Icaricia icariodes missionensis</i>	FE	Butterflies require larval host plant (lupines) within coastal scrub and grasslands.	Locally distributed in Marin, SF, and San Mateo counties.	Butterflies currently occupy existing habitat within Fort Baker.
San Bruno elfin butterfly <i>Incisalia mossii bayensis</i>	FE	Butterflies require larval host plant (<i>Sedum spathulifolium</i>) on rocky outcrops within coastal scrub.	Locally distributed only on the SF Peninsula.	Fort Baker is not within the species range.
Monarch butterfly <i>Danaus plexippus</i>	CSC Special Phenomenon	Throughout California, yet require autumn cluster sites for the fall migration.	Throughout most of California.	Autumn clusters occur at Fort Baker.
Opler's longhorn moth <i>Addela oplerella</i>	FSC	Found on serpentine grasslands.	Found in Marin County and San Francisco County.	May occur in the grasslands of Fort Baker.
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	FSC	Sand dune habitats.	Central coastal California.	Habitat not present at Fort Baker.
Glogose dune beetle <i>Coelus globosus</i>	FSC	Sand dune habitats.	Central coastal California.	Habitat not present at Fort Baker.
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	FSC	Fresh water habitats.	Found in the SF Bay Area.	No reports of occurrence at Fort Baker.
Bumblebee scarab beetle <i>Lichnanthe ursina</i>	FSC	Sand dune habitats.	Central coastal California.	Habitat not present at Fort Baker.
Plants				
San Francisco wallflower <i>Erysimum franciscanum</i>	FSC	Coastal bluffs.	Found in San Francisco and Marin counties.	Occurs on coastal bluffs adjacent to the north tower of the GG Bridge adjacent to Fort Baker.

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Presidio manzanita <i>Arctostaphylos hookeri ravenii</i>	FE/SE/1B	Serpentine chaparral and coastal grasslands.	Only found in the Presidio in SF County.	Fort Baker is not within the species range. In addition, serpentine communities are not found at Fort Baker.
San Francisco manzanita <i>Arctostaphylos hookeri</i> ssp. <i>franciscana</i>	FSC	Serpentine scrub.	Only found in cultivation.	Only found in cultivation.
Marsh sandwort <i>Arenaria paludicola</i>	FE/SE/1B	Marsh wetlands.	Currently only found in San Luis Obispo County.	Unlikely to occur at Fort Baker as suitable wetland habitat does not exist.
Presidio clarkia <i>Clarkia franciscana</i>	FE/SE/1B	Coastal scrub and grassland, associated with serpentine.	Only found in the Presidio in SF County.	Fort Baker is not within the species range. In addition, serpentine communities are not found at Fort Baker.
Beach layia <i>Layia carnosa</i>	FE/SE/1B	Coastal sand dunes.	Found in sand dunes in central and northern coastal California.	The appropriate dune habitat does not exist at Fort Baker. It is unlikely that this species occurs at Fort Baker.
Marian dwarf-flax <i>Hesperolinon congestum</i>	FT/ST/1B	Serpentine grasslands, scrub, and coastal prairie habitats.	Locally distributed in Marin, SF, and San Mateo counties.	The appropriate serpentine-based habitats do not exist at Fort Baker. It is unlikely that this species occurs at Fort Baker.
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	FSC	Annual herb found in grasslands.	Known to occur in the Central Valley.	Not reported at Fort Baker.
San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i>	FSC	Perennial herb found in coastal scrub and grasslands.	Found in Marin County.	Not reported at Fort Baker.
Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>Sericea</i>	FSC	Perennial herb found in coastal forests and scrub.	Found in Marin County.	Not reported at Fort Baker.

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Adobe sanicle <i>Sanicula maritima</i>	FSC	Perennial herb found in coastal grasslands and scrub habitats.	Found in San Francisco County.	Not reported at Fort Baker.
Mission Dolores campion <i>Silene verecunda</i> ssp. <i>Verecunda</i>	FSC	Perennial herb found in coastal grasslands and scrub habitats.	Found in San Francisco County.	Not reported at Fort Baker.
San Francisco owl's clover <i>Triphysaria floribunda</i>	FSC	Annual herb found in coastal parries and grasslands.	Found in San Francisco County.	Not reported at Fort Baker.
Marin checkermallow <i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	FSC	Perennial herb found in serpentine scrub	Found in Marin County.	Not reported at Fort Baker.
San Francisco lessingia <i>Lessingia germanorum</i>	FPE/CSC	Coastal scrub.	Found only in SF (Presidio) and San Bruno Mountain.	Out of species current range, no known occurrence of species within Fort Baker.

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APPENDIX D

BACKGROUND INFORMATION ON CUMULATIVE PROJECTS



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APPENDIX D BACKGROUND INFORMATION ON CUMULATIVE PROJECTS

This Appendix provides additional background information for the cumulative projects presented in Table 4-A, and referenced throughout the cumulative impact analysis in Chapter 4. A list of the projects (presented in the order they appear in this Appendix) is provided below, followed by a detailed description of each:

- D-1: Long-Term Management Strategy (LTMS) for the Disposal of Dredged Materials in the San Francisco Bay Region
- D-2: Golden Gate Bridge Seismic and Wind Retrofit Project
- D-3: Ferry Service at Fort Baker
- D-4: Battery Cavallo Preservation and Interpretation Plan
- D-5: Golden Gate Safety Roadside Rest Area and Vista Point Rehabilitation and Upgrade Project
- D-6: BRAC Clean Up – Fort Baker

D.1 LONG-TERM MANAGEMENT STRATEGY FOR DISPOSAL OF DREDGED MATERIAL IN THE SAN FRANCISCO BAY REGION

The following information related to regional dredging and disposal activities was taken directly from the *Final EIR/EIS for the Long-Term Management Strategy (LTMS) for the Placement of Dredged Material in the San Francisco Bay Region* (ACOE et al, October 1998).

Large-scale dredging has occurred within San Francisco Bay for more than 100 years. It is estimated that every year an average of 6 million cubic yards (mcy) must be dredged from shipping channels and related navigation facilities. Of that total, more than 80% of the dredged material is disposed of at three designated in-Bay sites (Carquinez Strait, San, San Pablo Bay, and Alcatraz Island). The Alcatraz Island site is the most heavily used, receiving nearly 4 mcy of sediment per year (USCOE et al, October 1998).

Historically sediments disposed at the Alcatraz site were expected to disperse to the ocean. In late 1982, however, a large mound was discovered at the site. Various disposal and site management efforts were attempted, but the mounding persisted and even intensified. Following these attempts, it became apparent that the capacity of the site would not be sufficient to accommodate new work projects that had been planned for construction over the next several years. At this same time, concerns regarding the environmental impacts of dredged material disposal on fisheries and other ecological resources were escalating (USCOE et al, October 1998).

Several different federal and state agencies have individual responsibilities for the management of dredging and disposal activities. These agencies include the US Army Corps of Engineers, US EPA, San Francisco Bay Conservation and Development Commission, San Francisco Bay RWQCB, and the State Water Resources Control Board. The growing concern related to capacity of existing disposal sites and the environmental and ecological effects associated with in-Bay disposal prompted these

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agencies to consider changes to their regulatory requirements. The agency-by-agency effort that ensued led to a fragmented and case-by-case approach which had unpredictable results for dredging project sponsors, created lack of public confidence that environmental resources were adequately being protected, and ultimately, caused project delays and related economic impacts to ports and other dredgers. In 1990, these agencies joined together with navigation interests, fishing groups, environmental organizations, and the public in a cooperative effort to establish a comprehensive Long-Term Management Strategy (LTMS) for Bay Area dredged material, which includes Fort Baker. The general goal of the LTMS is to distribute dredged material "...in a manner that minimizes environmental impacts and maximizes environmental benefits in an economically sound manner." (USCOE et al, October 1998)

The LTMS is divided into 5 primary phases. Certification of the Final EIR/EIS represents the culmination of Phase III (Detailed Analysis of Alternatives). In the Final EIR/EIS, the agency/project proponents identified the preferred alternative. This alternative (known as Alternative 3), emphasizes a balance between ocean disposal and beneficial reuse at upland/wetland sites with limited in-Bay disposal. Under the preferred alternative, approximately 40% of dredged material would be disposed of in the ocean, 40% at upland/wetland reuse sites, and the remaining 20% would be disposed of at designated in-Bay sites. The goals of this alternative cannot be achieved immediately, and will require the availability of new upland/wetland reuse sites. During the transition between existing and future conditions, it is anticipated that in-Bay disposal will gradually be decreased to reach the balance identified in Alternative 3. The next LTMS Phase (IV) is LTMS Implementation, followed by Phase V - Periodic Review and Update (USCOE et al, October 1998).

The Final EIR/EIS provided a comprehensive assessment of the cumulative impacts – both beneficial and adverse - associated with the various LTMS alternatives. This analysis has been reviewed and incorporated into the cumulative impact analysis for the Fort Baker Plan EIS, as appropriate. A discussion of the cumulative impacts of the preferred alternative is provided in the relevant sections of Chapter 4 in this EIS.

D.2 GOLDEN GATE BRIDGE SEISMIC AND WIND RETROFIT PROJECT

The Golden Gate Bridge, Highway and Transportation District (GGBHTD) is currently implementing a seismic and wind retrofit project for the Golden Gate Bridge. The purpose of the project to strengthen the bridge to withstand an earthquake with a magnitude of 8.3 on the Richter Scale and winds up to 100 miles per hour. Implementation of the project involves a series of construction action including foundation work at the south and north anchorage housing, and reinforcement of the north and south viaducts and towers. The northern and southern approaches of the Bridge are located within GGNRA boundaries. The GGBHTD has owned and operated the Bridge since 1937, and the northern and southern approaches are managed by the GGBHTD through a permitted right-of-way from the NPS.

The GGBHTD completed the final design and engineering for the project in 1997; the estimated total duration of construction is 11.5 years. In August 1997, the first phase of construction began with the retrofit of the North Viaduct. This phase is scheduled for completion in late 1999 or early 2000. The retrofit of the South Viaduct and Anchorage, Fort Point Arch and South Pylons (Phase 2) will be initiated in late 2000 with an estimated duration of three and a half years. The last construction (Phase 3) will be initiated thereafter (mid 2003), with an estimated duration of three and a half years, with completion of the work currently expected by the end of 2006, beginning of 2007.

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An analysis of the environmental consequences associated with the project was provided in an Environmental Assessment/Initial Study (EA/IS) in 1995. The impacts of the project, as described in the EA/IS, would be reduced to a less-than-significant level through implementation of the mitigation measures contained therein. The following is a summary of the impacts that could potentially contribute to the impacts anticipated as a result of the Fort Baker Plan. An analysis of the cumulative effect is provided in Chapter 4 of this EIS.

Biological Resources

The Golden Gate Bridge retrofit project, once complete, would result in the removal of approximately 5.6 acres of vegetation. Of this total, 1.7 acres is northern coastal bluff scrub, 0.2 acre is classified as disturbed/landscaping vegetation, and 3.7 acres is habitat for the mission blue butterfly. Through the required consultation with the USFWS, the GGBHTD has identified and implemented mitigation for the loss of mission blue butterfly habitat by restoring approximately 18.5 acres of habitat. The 18.5 acres of restored habitat is located at two separate sites within the GGNRA; Kirby Cove and East Fort Baker.

Geology & Soils

Drainage and erosion control measures were designed and included in the construction drawings for the project. Such measures included re-grading areas to control run-on and run-off, installing culvert and “v” ditches, sowing “seed free” hay bales, and treating areas with spray-on erosion control products. No significant adverse effects are anticipated.

Water Quality

The EA/IS determined that surface waters including San Francisco Bay could be adversely effected by site preparation activities, and subsequent storm water runoff transporting soil and sediment downslope into the Bay. As a result, a series of mitigation measures and compliance with the RWQCB regulations including the National Pollution Discharge Elimination System (NPDES) program for construction activities were implemented. In addition, construction activities are being completed in a manner consistent with the State Waste Discharge Requirements that include specific provisions and standards for the preservation and maintenance of state-wide water quality. A Storm Water Pollution Prevention and Monitoring Plan was also prepared and is being implemented. As a result, no significant effects on water quality would occur as a result of the Bridge Retrofit project.

Traffic Conditions

Traffic on the Bridge will not be affected by the project, with the exception of some lane restrictions at night (when traffic is lightest) during the second phase of construction. Increase in daily vehicular trips from construction workers and the movement of equipment and materials on U.S. 101 counts for less than one percent increase above daily traffic volumes, and fall within the normal fluctuations of daily traffic. In addition, the transport of construction equipment and materials is limited to off-peak periods, wherever feasible, and contractors are required to develop and implement a rideshare/transit program for workers accessing the site during construction.

Other impacts associated with the project were identified and mitigated to a less-than-significant level including soil erosion during construction, surface water quality effects, temporary closure of construction areas to visitors, air quality/dust emissions during construction, potential archeological effects, and temporary traffic impacts.

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D.3 FERRY SERVICE AT FORT BAKER

The provision of ferry service at Fort Baker was originally identified in the 1980 *Golden Gate National Recreation Area and Point Reyes National Seashore General Management Plan (GMP)*. Since its inclusion in the 1980 GMP, water transit within the Bay Area region, including potential service at Fort Baker, has received increased interest and become the subject of regional planning effort. In 1996 and 1997, the Bay Area Council and Bay Area Economic Forum cooperatively convened a comprehensive planning process involving key stakeholders, decision makers, and regional experts to develop a vision and conceptual design for the future regional water transit in the Bay Area. The NPS actively participated in that process.

In February 1999, the Bay Area Council and Bay Area Economic Forum published the results of this effort in *Charting the Course: Bay Area Water Transit Initiative - Vision and Conceptual Design*. Three locations within the GGNRA were identified in that document as potential recreation-based water transit terminals: Fort Baker, Fort Mason, and the Presidio (Crissy Field). The NPS is currently conducting a feasibility analysis to define opportunities at the three GGNRA sites. Future plans for proposed ferry service within the GGNRA will be integrated within the context of other regional planning efforts including the Highway 1 study currently being prepared as a joint effort led by Marin County, the California Department of Transportation, and the NPS. Any future plan for ferry service at Fort Baker will also be subject to environmental review under the National Environmental Policy Act (NEPA), and consultation with the National Marine Fisheries Service and United States Fish and Wildlife Service.

At this time, detailed information related to the physical and operational characteristics of potential ferry service (i.e., frequency of trips, size of boats, land-side improvements, etc.) at Fort Baker is not known. As a result, detailed analysis of the environmental effects of ferry service is not currently possible. However, a general analysis of potential cumulative effects is provided as appropriate in Chapter 4. Through future NEPA review, the NPS will fully evaluate the environmental effects associated with ferry service and develop mitigation measures to reduce or avoid adverse impacts.

D.4 BATTERY CAVALLO PRESERVATION AND INTERPRETATION PLAN

The NPS is in the process of developing a Preservation and Interpretation Plan for Battery Cavallo - a historic earthwork gun battery located at Fort Baker. Battery Cavallo is considered to be the best-preserved example of the post-Civil War era earthwork surviving in the country. The grasslands surrounding the battery provide habitat for the federally endangered Mission Blue butterfly. The entire site has been officially closed to the public for a number of years in order to protect both the historic and natural resources.

During the Fort Baker planning process, a comprehensive approach to the overall rehabilitation and stewardship of Battery Cavallo was recommended. This comprehensive approach is being pursued through a separate planning process that will focus on preserving the natural and cultural values of the site, while allowing for public enjoyment and appreciation. Once prepared, the proposed Plan will be subject to separate review under the National Environmental Policy Act (NEPA), and consultation with relevant regulatory agencies.

Although a draft plan is not currently available, the three primary objectives of the project are known. These objectives will be used by the NPS to review and select a preferred alternative for the plan, and

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as such provide some insight into the potential effect of this future plan. The three primary objectives are:

- To preserve and protect the historic resources of Battery Cavallo from the adverse effects of benign neglect over time, the destructive action of intrusive vegetation, and vandalism and other illegal activity;
- To provide for public use and enjoyment of the area through interpretive media, publications, wayside exhibits and limited guided tours by park staff, volunteers and park partners; and
- To protect the most significant natural resources of the site by enhancing habitat for the Mission Blue butterfly while protecting habitat for other birds, invertebrates and native plant species.

Given the purpose and intent of the Battery Cavallo Plan, no adverse effects to historic and natural resources are anticipated.

D.5 GOLDEN GATE SAFETY ROADSIDE REST AREA AND VISTA POINT REHABILITATION AND UPGRADE PROJECT

The California Department of Transportation (Caltrans) is proposing to rehabilitate and upgrade the existing Golden Gate Safety Roadside Rest Area and Vista Point (Vista Point). The site is located on the northern end of the Golden Gate Bridge, adjacent and to the southwest of Fort Baker. The site is situated approximately 500 feet above Fort Baker and provides sweeping views of the City of San Francisco, San Francisco Bay, Alcatraz Island, and Fort Baker. Vista Point has been operated by Caltrans since 1962, and receives an average of 2,500 visitors per day, or 1.5 million people annually. The site serves as both the starting point and terminus for pedestrians and bicyclists crossing the bridge.

The proposed improvements include upgrade and expansion of existing restroom facilities and related water facilities, measures to improve traffic flow, upgrade of the existing bicycle trail, rehabilitation and upgrade of the central plaza area including the placement of new memorial statue (to the Lone Sailor), and other on-site improvements.

A detailed description of the project and Environmental Assessment/Initial Study (EA/IS) (pursuant to NEPA and the California Environmental Quality Act) are currently being prepared by Caltrans. It is anticipated that the EA/IS will be circulated to the public for review in Fall 1999. Construction is proposed to start in Spring 2000, and be completed by Spring 2001, pending completion of the environmental review process and project approval. Based on the information currently known, the proposed project is not anticipated to have a significant adverse environmental effect. A general discussion of anticipated effects is provided in relevant sections of Chapter 4 (under "cumulative impacts").

D.6 FORT BAKER BASE REALIGNMENT AND CLOSURE (BRAC) CLEANUP PLAN

Chemically-impacted soil, sediment, and groundwater have been identified by the United States Army at Fort Baker in various locations. To date, the Army has proposed specific remedial actions to address chemically-impacted soil and sediment in six areas: the concrete basin; engine repair shop; paint shed; vehicle wash rack; yacht club; and the storm drain system. Other areas may also require

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remediation, however, such areas have not been proposed and would likely not be identified until after February 2000.

With the exception of the storm drain system, all remedial work currently identified is proposed for implementation and completion during the months of July through October 2000. Remediation of the storm drain system began in June 1999, and it may not be completed until after November 2000. Most of the remedial actions would include excavation and disposal offsite of chemically-impacted soil. The estimated volume for soil in each of these locations ranges from 40 to 900 cubic yards (cy). Some demolition (i.e., paint shed structure, various catch basins, etc.) would also be implemented, and the debris removed offsite for disposal.

Other potential areas, not yet designated for remediation, may include Horseshoe Bay, the former fuel distribution pipeline encircling the Parade Ground, the former firing range (west of Building 533), transformers (at 11 different locations), and various underground and above ground storage tanks (ASTs and USTs). Remedial actions at most of these sites would likely be similar to those described above (i.e., excavation and removal offsite of chemically-impacted soil or other materials). Remedial actions within Horseshoe Bay could include dredging of all or portions of the Bay. If determined to be necessary, this action is not anticipated to occur until sometime after March 2001.